

REMARKS

Interview request

Applicants respectfully request a telephonic interview after the Examiner has reviewed the instant response and amendment. Applicants request the Examiner call Applicants' representative at (858) 720-5133.

Office Communication mailed June 12, 2008

In response to the Office Communication mailed June 12, 2008, and in further response to the non-final OA mailed December 6, 2006, Applicants respectfully request entry of the amendment and consideration of the remarks set forth herein.

In brief, in the Office Communication mailed June 12, 2008, the Office requested Applicants to further address rejection items 10, 23, and 24, from the non-final OA mailed December 6, 2006. This response endeavors to further address these issues; thus, this response supplements Applicants' response of June 06, 2007, and subsequent responses, and incorporates by reference their remarks of June 06, 2007, and subsequent responses.

Status of the Claims

Pending claims

Claims 1 to 16, 21 to 36 and 39 to 47 are pending. Claims 14 and 22, are withdrawn from consideration. Claims 1 to 13, 15, 16, 21, 23 to 36 and 39 to 47, are pending and under consideration.

The instant amendment further amends the claims as set forth, and not yet entered, from Applicants' last response of February 28, 2008. As requested by the Examiner, the amendments in Applicants' last response are incorporated into the instant amendment to present one complete current claim set for the Examiner's convenience.

Species Restriction Requirement and Species Election

The Office alleged that the pending claims of the application are directed to ten (10) patentably distinct inventions under 35 U.S.C. §121, as set forth in detail on page 2 of the OA.

Applicant were required to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Applicants elected the species bacterioplankton, claim 43, which specifically lists the several exemplary species of microorganisms, including bacterioplankton.

When the elected species is held to be allowable, Applicants are entitled to consideration (examination) of additional species; if all species are held to be allowable, a generic claim should be allowed (MPEP §809.02(a); pg 800-53-54, 8th Edition, Rev. 6, Aug. 2006).

Issues under 35 U.S.C. §112, second paragraph

Claims 1 to 13, 15 to 17, 20, 21, 23 to 36, 39 and 40 are rejected under 35 U.S.C. §112, second paragraph, for reasons set forth in detail on pages 3 to 4, paragraphs 8 to 14, of the OA. The instant amendment addresses this issue.

Addressing in particular rejection item 10, the Office requests clarity regarding the claims' preamble with regards to the starting material of the methods of independent claims 1, 39 and 40; where the starting material of the methods are a mixed population of uncultivated cells. The instant amendment addresses this issue.

Issues under 35 U.S.C. §103(a)

Claim 30, Perlman in view of Peterson and skill in the art

This response addresses rejection item 23, page 15 of the OA, where claim 30 is rejected under 35 U.S.C. §103(a), over Perlman, et al., U.S. Patent No. 4,801,529, filed January 31, 1989, issued January 31, 1989 (hereinafter "Perlman"), in view of Peterson, and the state of the art.

Claim 30 encompasses claim 1 further comprising isolating a gel microdroplet (claim 23), and further comprising isolating the gel microdroplet and isolating a microcolony from the gel microdroplet (claim 26), and further comprising isolating a cell from the isolated microcolony (claim 26), wherein isolating the gel microdroplet comprises sorting the encapsulated microcolony by size (claim 28), wherein the gel microdroplet is isolated by a fluorescence activated cell sorting (FACS) or by a capillary array-based system (claim 30).

The Office notes that Perlman in view of Peterson is defective in that they do not teach isolating gel microdroplets by FACS; and the Office alleges that because Peterson teaches isolating

microdroplets by FACS, the state of the art corrects this defect by combining with Perlman in view of Peterson to teach the isolation of gel microdroplets by FACS.

However, as noted in their June 06, 2007 response (see *inter alia* pages 16 to 17 of that response), Applicant submit that Peterson is further defective in that it does not teach or suggest use of, *inter alia*, a system for isolating, maintaining and/or culturing cells in porous microdroplets, where the system comprises a growth column with an inlet and an outlet, and a mechanism for moving or circulating a growth medium through the length of the growth column, wherein the growth column comprises openings at either end of the column to allow the culture media to flow through the length of the column, and because Perlman does not teach any growth column, Peterson cannot be used to correct the defects in Perlman to teach the (amended) claimed methods (neither Peterson nor Perlman in any combination teach or suggest the (amended) claimed methods).

Applicants also respectfully aver that the Office does not set forth how the state of the art could correct these defects. Accordingly, because Perlman in view of Peterson and the state of the art do not teach or suggest the invention of claim 30, this section 103 rejection can be properly withdrawn.

Claims 31 and 34, Perlman in view of Peterson and skill in the art

This response addresses rejection item 24, pages 15 to 16, of the OA, where claims 31 and 34 are rejected under 35 U.S.C. §103(a), over Perlman, in view of Peterson, and the state of the art.

Claim 31 further limits the method of dependent claim 27, by further comprising maintaining an isolated cell by re-encapsulating and re-culturing the isolated cell; where claim 27 further comprises isolating a cell from an isolated microcolony, where the microcolony is isolated from a gel microdroplet (claim 26).

Claim 34 and claim 25 are amended in this response; after entry of this amendment claim 34 further comprises culturing the cell isolated from the porous microdroplet isolated in claim 25.

As noted in their June 06, 2007 response (see *inter alia* pages 16 to 17 of that response), Applicant submit that Peterson is further defective in that it does not teach or suggest use of, *inter alia*, a system for isolating, maintaining and/or culturing cells in porous microdroplets, where the system comprises a growth column with an inlet and an outlet, and a mechanism for moving or circulating a growth medium through the length of the growth column, wherein the growth column

comprises openings at either end of the column to allow the culture media to flow through the length of the column, and because Perlman does not teach any growth column, Peterson cannot be used to correct the defects in Perlman to teach the (amended) claimed methods (neither Peterson nor Perlman in any combination teach or suggest the (amended) claimed methods).

Applicants also respectfully aver that the Office does not set forth how the state of the art could correct these defects. Accordingly, because Perlman in view of Peterson and the state of the art do not teach or suggest the invention of claims 31 and 34, this section 103 rejection can be properly withdrawn.

CONCLUSION

It is believed that the all claims pending in this application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket No. 564462008100.

As noted above, Applicants have requested a telephone conference with the undersigned representative to expedite prosecution of this application. After the Examiner has reviewed the instant response and amendment, please telephone the undersigned at (858) 720-5133.

Dated: July 17, 2008

Respectfully submitted,

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